AMENDMENTS TO THE CLAIMS:

1. (canceled)

2. (previously amended) The method of claim 8 wherein the wet oxidation process is performed at a temperature in a range of about 450 °C to about 750 °C.

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3. (previously amended) The method of claim 8 wherein the wet oxidation process is performed at a temperature in a range of about 750 °C to 950 °C.

4. (previously amended) The method of claim 8 wherein the oxidation process is carried out for a duration in a range of about 20 to about 60 seconds.

5. (previously amended) The method of claim 8 wherein the ratio of hydrogen to oxygen gases in the mixture is in the range of about 0.1 to about 0.5.

6. (canceled)

7. (canceled)

8. (currently amended) A method of fabricating a semiconductor device comprising:

depositing an oxygen-deficient dielectric film having a dielectric constant of at least about 25 over an underlying layer;

subjecting the dielectric film to a wet oxidation with steam process provided by heating a mixture of hydrogen and oxygen gases in a rapid thermal process chamber at a temperature of at least about 450 °C and for a duration which increases the oxygen content of the dielectric film, said steam provided in a ratio of at least 0.005 relative to other gases present in the rapid thermal process chamber, wherein the ratio of hydrogen to oxygen gases in the mixture is in the range of about 0.1 to about 0.8, and wherein the pressure of said rapid thermal process chamber is ~~less than atmospheric pressure~~ in the range from

about 1 milliTorr to less than atmospheric pressure; and

subjecting the dielectric film to a heat treatment in an ambient comprising a stabilizing gas selected from the group consisting of N_2, O_2, O_3, NO, and N_2O.

9. (canceled)

10. (previously amended) The method of claim 8 wherein subjecting the dielectric film to a heat treatment in an ambient comprising a stabilizing gas is performed prior to subjecting the film to the wet oxidation.

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11. (previously amended) The method of claim 8 wherein the wet oxidation is performed at a temperature less than the temperature for subjecting the dielectric film to a heat treatment in an ambient comprising a stabilizing gas.

12. (previously amended) The method of claim 8 wherein subjecting the dielectric film to a heat treatment in an ambient comprising a stabilizing gas is performed in the rapid thermal process chamber.

Claims 13-40 (canceled).

41. (withdrawn) A method of fabricating a semiconductor device comprising:

depositing a silicon nitride film over an underlying layer;

subjecting the silicon nitride film to a wet oxidation with a mixture of hydrogen and oxygen gases in a rapid thermal process chamber at a temperature of at least about 450 °C and for a duration which increases the oxygen content of the silicon nitride film; and

subjecting the silicon nitride film to a heat treatment in an ambient comprising a stabilizing gas selected from the group consisting of N_2, O_2, O_3, NO, and N_2O.

42. (currently amended) A method of fabricating a semiconductor device comprising:

depositing an oxygen-deficient dielectric film having a dielectric constant of at least about 25 over an underlying layer;

subjecting the dielectric film to a wet oxidation with steam process provided by heating a mixture of hydrogen and oxygen gases in a rapid thermal process chamber at a temperature of at least about 450 °C and for a duration which increases the oxygen content of the dielectric film, said steam provided by a catalytic system in a ratio of at least 0.005 relative to other gases present in the rapid thermal process chamber, and wherein the pressure of said rapid thermal process chamber is ~~less than atmospheric pressure~~ in the range from about 1 milliTorr to less than atmospheric pressure; and

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subjecting the dielectric film to a heat treatment in an ambient comprising a stabilizing gas selected from the group consisting of N_2, O_2, O_3, NO, and N_2O.

43. (currently amended) A method of fabricating a semiconductor device comprising:

depositing an oxygen-deficient dielectric film having a dielectric constant of at least about 25 over an underlying layer;

subjecting the dielectric film to a wet oxidation with steam process provided by heating a mixture of hydrogen and oxygen gases in a rapid thermal process chamber at a temperature of at least about 450 °C and for a duration which increases the oxygen content of the dielectric film, said steam provided by a pyrogenic system in a ratio of at least 0.005 relative to other gases present in the rapid thermal process chamber, and wherein the pressure of said rapid thermal process chamber is ~~less than atmospheric pressure~~ in the range from about 1 milliTorr to less than atmospheric pressure; and

subjecting the dielectric film to a heat treatment in an ambient comprising a

stabilizing gas selected from the group consisting of N_2, O_2, O_3, NO, and N_2O.

44. (currently amended) A method of fabricating a semiconductor device comprising:

depositing an oxygen-deficient dielectric film having a dielectric constant of at least about 25 over an underlying layer;

subjecting the dielectric film to a wet oxidation with steam process in a rapid thermal process chamber at a temperature of at least about 450 °C and for a duration which increases the oxygen content of the dielectric film, said steam provided by a bubbled water vapor system in a ratio of at least 0.005 relative to other gases present in the rapid thermal process chamber, and wherein the pressure of said rapid thermal process chamber is ~~less than atmospheric pressure~~ in the range from about 1 milliTorr to less than atmospheric pressure; and

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subjecting the dielectric film to a heat treatment in an ambient comprising a stabilizing gas selected from the group consisting of N_2, O_2, O_3, NO, and N_2O.

45. (currently amended) A method of fabricating a semiconductor device comprising:

depositing an oxygen-deficient dielectric film having a dielectric constant of at least about 25 over an underlying layer;

subjecting the dielectric film to a single wet oxidation anneal process consisting of steam provided by heating a mixture of hydrogen and oxygen gases in a rapid thermal process chamber at a temperature of at least about 450 °C and for a duration which increases the oxygen content of the dielectric film, and wherein the pressure of said rapid thermal process chamber is ~~less than atmospheric pressure~~ in the range from about 1 milliTorr to less than atmospheric pressure; and

subjecting the dielectric film to a heat treatment in an ambient comprising a stabilizing gas selected from the group consisting of N_2, O_2, O_3, NO, and N_2O.

46. (withdrawn) A method of fabricating a semiconductor device comprising:

depositing an oxygen-deficient dielectric film having a dielectric constant of at least about 25 over an underlying layer;

subjecting the dielectric film to a wet oxidation anneal process with steam provided by heating a mixture of hydrogen and oxygen gases in a rapid thermal process chamber at a temperature of at least about 450 °C and for a duration which increases the oxygen content of the dielectric film, said steam provided in a ratio of about 0.1 to about 0.5 relative to other gases present in the rapid thermal process chamber; and

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subjecting the dielectric film to a heat treatment in an ambient comprising a stabilizing gas selected from the group consisting of N_2, O_2, O_3, NO, and N_2O.

47. (withdrawn) A method of fabricating a semiconductor device comprising:

depositing an oxygen-deficient dielectric film having a dielectric constant of at least about 25 over an underlying layer;

subjecting the dielectric film to a wet oxidation anneal process with steam provided by heating a mixture of hydrogen and oxygen gases in a rapid thermal process chamber at a temperature of at least about 450 °C and for a duration which increases the oxygen content of the dielectric film, said wet oxidation anneal process comprising only of hydrogen and oxygen gases, wherein the ratio of hydrogen to oxygen gases in the mixture is in the range of about 0.1 to about 0.8; and

subjecting the dielectric film to a heat treatment in an ambient comprising a stabilizing gas selected from the group consisting of N_2, O_2, O_3, NO, and N_2O.